

## MATTERS ARISING

### Fournier's gangrene and HIV disease

We were surprised to read the recent claim by Nelson and colleagues to have described the first case of Fournier's gangrene in a patient with HIV disease.<sup>1</sup> Contrary to the authors' assertion, this was in fact first reported in this very journal a little more than a year previously.<sup>2</sup> Moreover, the clinical features of the case described by Nelson *et al* are somewhat unusual and merit further comment.

Fournier's gangrene is a well defined syndrome of necrotising fasciitis of the male genitalia and perineum leading to gangrene of the overlying dermal tissues.<sup>3</sup> It is caused by a synergistic polymicrobial infection of the subcutaneous tissues, which spreads rapidly along the fascial planes. Although in severe cases this necrotising infection can spread to involve the anterior abdominal wall, few reports have documented this process extending as far as the axilla.<sup>4,5</sup> In the case described by Nelson *et al* the patient had widespread ulcerating lesions affecting the axilla, both groins and cornea in addition to scrotal necrosis. It is unclear, however, if the axillary lesion was a direct result of contiguous infection spreading from the scrotum and groin or caused by a separate or secondary pathological process. Did the surgical debridement consist of removal of necrotic scrotal tissue alone or was more extensive incision and drainage of subcutaneous tissues required, up to and including the axilla?

*Pseudomonas aeruginosa*, which was isolated from the blood and groin lesion in the authors' case, is associated with a number of specific cutaneous lesions.<sup>6,7</sup> Although it has been identified as an aetiological agent in Fournier's gangrene,<sup>8</sup> it is classically associated with an infective necrotising vasculitis which results in a distinctive necrotic skin lesion—ecthyma gangrenosum. The clinical description of ecthyma gangrenosum and its cutaneous distribution bear a striking resemblance in nature and pattern to the lesions described by Nelson *et al*. Ecthyma gangrenosum lesions are characterised by round, indurated, ulcerated areas with black necrotic centres.<sup>6,7</sup> They can be single or multiple, cause extensive tissue damage and are typically found in the groin, scrotum, perineum and axilla.<sup>6</sup> Although experimental evidence suggests that ecthyma gangrenosum can arise from local invasion, in general it is regarded as a specific manifestation of severe systemic *pseudomonas* infection, usually in immunocompromised and often neutropenic hosts.<sup>9</sup>

Histological distinction of these conditions should be possible. Ecthyma gangrenosum is characterised by a necrotising vasculitis with bacterial invasion of the media and adventitia of arterial and venous walls with a sparse neutrophil infiltrate and little or no intimal involvement.<sup>9,10</sup> Occasionally fibrin thrombi are found in small vessels. In contrast, Fournier's gangrene causes an obliterative endarteritis with prominent subcutaneous vessel throm-

bosis which is responsible for the subcutaneous tissue necrosis and dermal gangrene.<sup>3</sup>

The diversity in case description in the literature suggests that the diagnosis of Fournier's gangrene of the scrotum is not uncommonly a misnomer.<sup>11</sup> Given the similarities of this reported case of Fournier's gangrene to the clinical and microbiological description of ecthyma gangrenosum, histology of the cutaneous lesions would have proved of considerable interest.

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- 4 Gibson TE. Idiopathic gangrene of the scrotum: with report of a case and review of the literature. *J Urol* 1930;23:125-59.
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- 10 van den Broek PJ, van der Meer JWM, Kunst MW. The pathogenesis of ecthyma gangrenosum. *J Infect* 1979;1:263-7.
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## BOOK REVIEWS

**Molecular and Cell Biology of Opportunistic Infections in AIDS.** Edited by S Myint and A Cann. London, Chapman and Hall. (Pp 283, £40) 1992. ISBN 0-412-45330-4.

The advances in molecular biology have revolutionised the prospects for a better understanding of both the biology and rapid diagnosis of infectious disease.

This book covers most aspects of the molecular and cell biology of opportunistic infections in AIDS and also attempts to explain the principles and applications of molecular techniques to these diseases.

Each chapter is divided into an introduction, which is followed by a section on antigenic and genetic organisation and ends with the molecular approaches to diagnosis. Importantly, a recent and comprehensive

reference list concludes each chapter.

By way of introduction, the first two chapters include a clinical overview of opportunistic infections in individuals with AIDS together with the fundamental concepts regarding gene and probe amplification techniques. The subsequent chapters, especially those covering cryptosporidiosis, toxoplasma, candida, mycoplasma and herpes viruses, are informative and well written.

The book is aimed at clinicians and scientists and provides clear and concise updates on most of the main opportunistic infections in individuals with AIDS. It is a well presented and useful guide although it would have benefited from more illustrations, diagrams and tables. Some of the chapters could have expanded their sections on the molecular approaches to diagnosis bearing in mind the problems of serological studies in immunocompromised patients. In addition, by the editors' own admission, they could be criticised for excluding a discussion of cryptococcal infections and including a section on salmonella, shigella and campylobacter.

Although a broad spectrum of opportunistic infections is included, it would have been of interest to have had a small section concerning the polyoma viruses, such as JC virus, which causes progressive multifocal leucoencephalopathy in an estimated 4-7% of AIDS patients. This could have possibly been included with the herpesviruses in the setting of opportunistic viral infections.

Despite these minor reservations, it is a book that is a very useful reference, is excellent for dipping into and at £40 it would be a valuable edition to a departmental library.

MARK ZUCKERMAN

**Candidiasis: Pathogenesis, Diagnosis and Treatment.** Edited by Gerald P Bodey. New York, Raven Press, 1993. 2nd Ed. (Pp 420; US\$119) ISBN 0-88167-954-2.

Candida infections increase year upon year in number and variety. They are encountered in general practice and a wide range of specialities. The use of broad spectrum antibiotics is still a common cause; however, there are more and more immunocompromised patients because of medical treatments for cancers and organ transplantation, as well as diseases such as HIV and AIDS. This multiauthor text succeeds in summarising knowledge of candida infections ranging from biology of the organisms involved, through clinical conditions and treatments, to the pharmacokinetics of antifungal agents. Like many texts that cover one subject it has something for everyone, but, perhaps not enough for the individual specialist.

The editor and the authors (with one exception) are all from the USA, many from Houston, Texas. They come mainly from the field of infectious diseases. Thus there is one contributor from dermatology but none from gynaecology or genitourinary medicine.

Consultants, specialists and trainees in genitourinary medicine in the UK will be particularly interested in three chapters, that on oral and esophageal candidiasis, and